

# I & Q DEMODULATORS

## QUADRATURE I.F. MIXERS

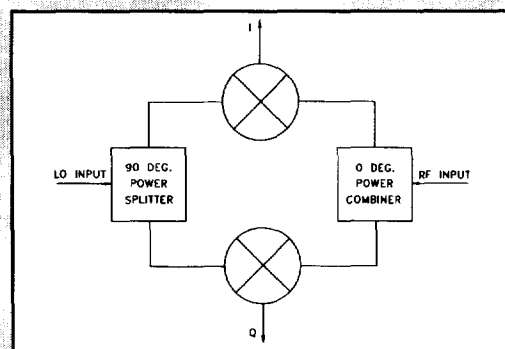
(1) Carrier (LO) Frequency (MHz)	(2) RF Frequency (MHz)	I & Q Frequency (MHz)	Conversion Loss (dB) max.	Amplitude Balance (dB) max.	Phase Balance (deg) max.	Isolation L/R (dB) min.	L/I (dB) min.	VSWR min.	P/N
10.2-11.3	LO ± 5	DC-5	10.0	0.4	2.0	40	35	1.5:1	ID-01-*
20.3-22.4	LO ± 5	DC-5	10.0	0.4	2.0	40	35	1.5:1	ID-02-*
28.5-31.5	LO ± 10	DC-10	10.0	0.4	2.0	40	35	1.5:1	ID-03-*
57.0-63.0	LO ± 20	DC-20	10.0	0.4	2.0	40	35	1.5:1	ID-04-*
66.5-73.5	LO ± 20	DC-20	10.0	0.4	2.0	40	35	1.5:1	ID-05-*
95.0-105	LO ± 20	DC-20	10.0	0.4	3.0	35	30	1.5:1	ID-06-*
100-120	LO ± 20	DC-20	10.0	0.4	3.0	35	30	1.5:1	ID-110-E
133-147	LO ± 40	DC-40	10.0	0.4	3.0	35	30	1.5:1	ID-07-*
190-210	LO ± 50	DC-50	10.0	0.4	3.0	35	30	1.5:1	ID-08-*
220-260	LO ± 50	DC-50	10.0	0.4	4.0	35	30	1.8:1	ID-240-E
285-315	LO ± 50	DC-50	11.0	0.4	4.0	35	30	1.8:1	ID-09-*
380-420	LO ± 50	DC-50	11.0	0.7	4.0	35	30	1.8:1	ID-10-*
810-830	LO ± 50	DC-50	11.0	0.8	6.0	35	30	1.8:1	ID-11-*
865-900	LO ± 50	DC-50	11.0	0.8	6.0	35	30	1.8:1	ID-12-*
935-960	LO ± 50	DC-50	11.0	0.8	6.0	35	30	1.8:1	ID-13-*
1425-1575	LO ± 50	DC-50	12.0	1.0	7.0	30	25	1.8:1	ID-14-*
1710-1735	LO ± 50	DC-50	12.0	1.0	7.0	30	25	1.8:1	ID-15-*
1805-1880	LO ± 50	DC-50	12.0	1.0	7.0	30	25	1.8:1	ID-16-*
10-20	LO ± 5	DC-5	10.0	0.5	5.0	35	30	1.5:1	IDO-01-**
20-40	LO ± 5	DC-5	10.0	0.5	5.0	35	30	1.5:1	IDO-02-**
40-80	LO ± 20	DC-20	10.0	0.5	5.0	35	30	1.5:1	IDO-03-**
60-120	LO ± 20	DC-20	11.0	0.6	5.0	35	30	1.5:1	IDO-04-**
100-190	LO ± 40	DC-40	11.0	0.6	5.0	35	30	1.5:1	IDO-05-**
150-280	LO ± 40	DC-40	11.0	0.6	5.0	30	25	1.5:1	IDO-06-**
200-370	LO ± 50	DC-50	11.0	0.6	5.0	30	25	1.5:1	IDO-07-**
300-550	LO ± 50	DC-50	11.0	0.7	6.0	30	25	1.8:1	IDO-08-**
10-50	LO ± 5	DC-5	11.0	0.4	7.0	35	30	1.5:1	IDO-09-***
30-150	LO ± 10	DC-10	11.0	0.4	7.0	35	30	1.5:1	IDO-10-***
50-250	LO ± 20	DC-20	11.0	0.4	7.0	35	30	1.5:1	IDO-11-***
2000-4000	LO ± 100	DC-100	10.0	1.0	8.0	35	30	1.5:1	IDOH-01-458
3000-6000	LO ± 100	DC-100	10.0	1.2	10.0	35	30	1.5:1	IDOH-02-458
4000-8000	LO ± 100	DC-100	10.0	1.5	12.0	35	30	1.5:1	IDOH-03-458

Modulators/  
Demodulators

- \* Available in outline # 102, 105, 302, 412, & E
- \*\* Available in outline # 105 & 302, 412, & F
- \*\*\* Available in outline # 412

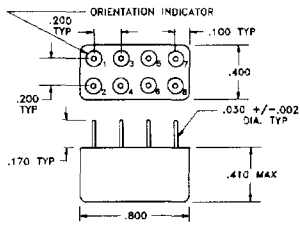
SMA female connectors standard on outline #412, refer to page 98 for more information.

Notes: (1) Operating LO power level is  $+10 \pm 0.5$  dBm.  
 (2) Operating RF power level is  $-10 \pm 0.5$  dBm.  
 IF frequency Q is  $+90^\circ$  relative to IF frequency I when RF frequency is  $>$  LO frequency.

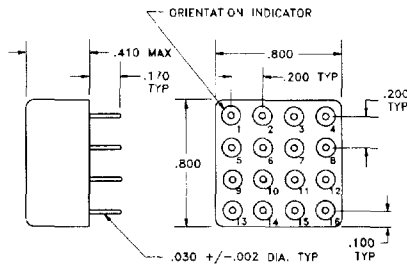


# I & Q DEMODULATORS

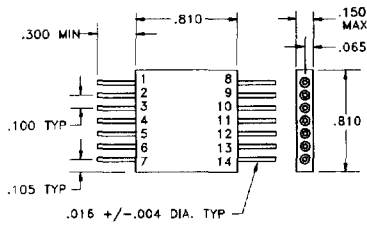
## QUADRATURE I.F. MIXERS



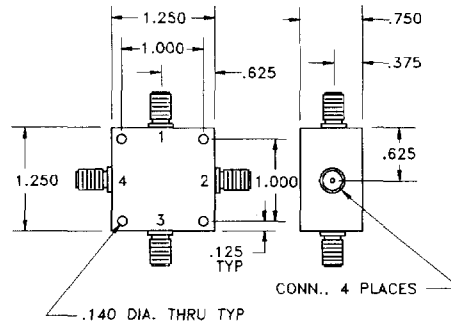
**Outline 102**



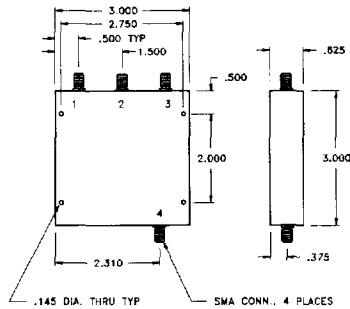
**Outline 105**



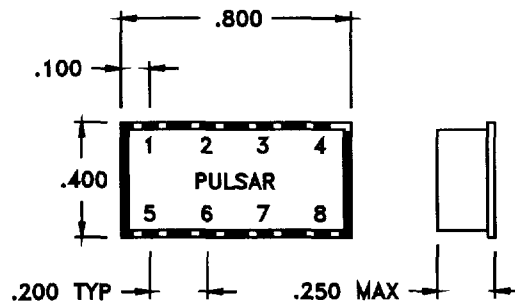
**Outline 302**



**Outline 412**

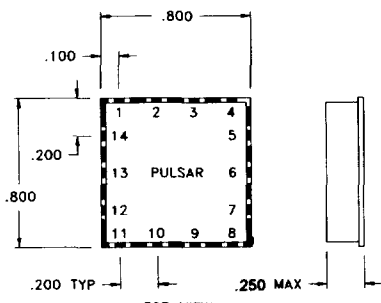


**Outline 458**



**Outline E**

Modulators/  
Demodulators



**Outline F**

### Port Configuration

Outline	RF	LO	I	Q	Ground
102	1	8	3	4	2,5,6,7
105	1	16	13	4	2,3,5-12,14,15
302	14	1	12	5	2-4,6-11,13
412	3	1	2	4	Housing
458	2	4	1	3	Housing
E	4	5	3	7	1,2,6,8
F	6	12	9	3	All Others